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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shigeaki Suzuki

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5277

7590

08/23/2005

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EXAMINER

MOORE, IAN N

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/664,096

Applicant(s)

SUZUKI ET AL.

Examiner

Ian N. Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 6-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Mladenovic et al (6,657,996) in view of Fujino (US005436899A).

With regard to claim 1, Mladenovic et al discloses a gateway 15 (digital circuit multiplication equipment means for transmitting) (column 3, lines 30-33) that is connected to another gateway 17 (another digital circuit multiplication equipment) (column 3, lines 37-38) via central office/PBX 12 (exchange) as illustrated by Figure 1. Both gateway 15 and gateway 17 are connected to via central office/PBX 12 (exchange) via PSTN line 16 (trunk channel) (column 3, lines 26-28). Gateway 15 and gateway 17 may operate in tandem authorized mode 52 (tandem pass through function) (column 6, lines 13-15). With respect to applicant's limitation "means for continuously assigning a bearer circuit" (lines 13-14), each time a call is connected, a bearer circuit is assigned. Mladenovic also discloses a sound channel (PSTN line 16).

Mladenovic does not explicitly disclose operating as a channel regardless of whether sound is present on the trunk channel is well known in the art. However, operating as a sound channel regardless of whether sound is present on the trunk channel. In particular, Fujino teaches a bearer circuit with respect to the trunk channel operated such that bearer circuit continues (see FIG. 7C, continuous CH#0-7) to be operated as a sound channel regardless of whether

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sound is present on the trunk (see FIG. 7C, speed channel CH#1 and silent channel CH#2; see col. 8, line 40-67; note that channels/circuits are assigned and operated continuously from CH#0-7 on speech and silent channel). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide, as taught by Fujino in the system of Mladenovic, so that it would reduce the deterioration of a band and of sound quality; see Fujino col. 8, line 44-46; and provide highly efficient and high quality communication; see Fujino col. 2, line 15-19.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mladenovic et al (6,657,996) in view of Shanker et al (6,570,869) and further in view of Fujino.

With regard to claim 2, Mladenovic et al discloses a gateway 15 (digital circuit multiplication equipment I means for transmitting) (column 3, lines 30-33) that is connected to another gateway 17 (another digital circuit multiplication equipment) (column 3, lines 37-38) via central office/PBX 12 (exchange) as illustrated by Figure 1. Both gateway 15 and gateway 17 are connected to via central office/PBX 12 (exchange) via PSTN line 16 (trunk channel) (column 3, lines 26-28). Gateway 15 and gateway 17 may operate in tandem authorized mode 52 (tandem pass through function) (column 6, lines 13-15). With respect to applicant's limitation "means for continuously assigning a bearer circuit" (lines 13-14), each time a call is connected, a bearer circuit is assigned. Mladenovic et al, however, does not expressly disclose a bearer channel number in the assignment message of the bearer circuit. Shanker et al discloses a bearer channel identifier (bearer channel number) in an SS7 environment (column 9, lines 43-44).

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A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Shanker et al in Mladenovic et al to establish a bearer channel between two coding units (Shanker et al, column 2, lines 2-5). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Mladenovic et al and Shanker et al so as to obtain the invention as specified in claims 2 and 3. Mladenovic also discloses a sound channel (PSTN line 16).

Neither Mladenovic nor Shanker explicitly discloses operating as a channel regardless of whether sound is present on the trunk channel. However, operating as a sound channel regardless of whether sound is present on the trunk channel is well known in the art. In particular, Fujino teaches a bearer circuit with respect to the trunk channel operated such that bearer circuit continues (see FIG. 7C, continuous CH#0-7) to be operated as a sound channel regardless of whether sound is present on the trunk (see FIG. 7C, speed channel CH#1 and silent channel CH#2; see col. 8, line 40-67; note that channels/circuits are assigned and operated continuously from CH#0-7 on speech and silent channel). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide, as taught by Fujino in the combined system of Mladenovic and Shanker, so that it would reduce the deterioration of a band and of sound quality; see Fujino col. 8, line 44-46; and provide highly efficient and high quality communication; see Fujino col. 2, line 15-19.

4. Claims 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Mladenovic et al (6,657,996) in view of Klotzbach et al (5,410,754) and further in view of Delargy (US006029127A).

With regard to claims 4 and 5, Mladenovic et al discloses a gateway 15 (digital circuit multiplication equipment / means for transmitting) (column 3, lines 30-33) that is connected to another gateway 17 (another digital circuit multiplication equipment) (column 3, lines 37-38) via central office/PBX 12 (exchange) as illustrated by Figure 1. Both gateway 15 and gateway 17 are connected to via central office/PBX 12 (exchange) via line PSTN 16 (trunk channel) (column 3, lines 26-28). Gateway 15 and gateway 17 may operate in tandem authorized mode 52 (tandem pass through function) (column 6, lines 13-15). Mladenovic et al further discloses that gateways 15 and 17 transmit a signature sequence S1 (information) embedded (means for embedding) in the PCM stream (PCM signal) as decompressed voice (indicating whether or not a encoded speech signal). Alternatively, in the event that compressed data is sent signature sequence S2 is sent. When gateway 17 recognizes reception of S1 (means for detecting), gateway 17 shifts to tandem authorized mode 52 (operated under passthrough operation) (column 6, lines 3-12).

Mladenovic et al et al, however, does not expressly disclose means for outputting an invalid encoded signal in such case that the input derived from the bearer circuit is not contained in the input signal. Klotzbach et al discloses PCM encoded data sent to a first signal transform 46 that process individual channels (column 11, lines 13-17). If the data received were invalid (invalid encoded signal) then the first signal transform 46 notifies the connection control 47 which in turn sends a message to the transmit side of signal transform 48 to send a retransmission query (first invalid encoded signal) to the sending modem (column 11, lines 32-36). The method disclosed by Klotzbach et al may also be applied to speech data.

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Klotzbach et al in Mladenovic et al to as establish method to handle invalid

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or corrupted data (Klotzbach et al, column 11, lines 32-36). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Mladenovic et al and Klotzbach et al so as to obtain the invention as specified in claims 4 and 5.

Neither Mladenovic nor Klotzbach explicitly discloses a silent signal. However, outputting a silent signal in a trunk channel for receiving said invalid signal is well known in the art. In particular, Fujino teaches outputting a silent signal in a trunk channel (see FIG. 1, step 22; encoded signal with silent indication) for receiving said invalid signal (see FIG. 1, step 20, when detecting a signal contain silent; see col. 2, line 19-35).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide outputting silent signal, as taught by Delargy in the combined system of Mladenovic and Klotzbach, so that it would improve audio compressing for the characteristic; see Delargy col. 1, line 40-60.

5. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mladenovic et al (6,657,996) in view of Wellard et al (6,510,219) and further in view of Fujino.

With regard to claim 15, 16, 17 and 18, Mladenovic et al discloses a gateway 15 (transmission device / first trunk number) (column 3, lines 30-33) that is connected to another gateway 17 (another transmission device I second trunk number) (column 3, lines 37-38) via central office/PBX 12 (exchange) as illustrated by Figure 1. Both gateway 15 and gateway 17 are connected to via central office/PBX 12 (exchange) via PSTN line 16 (input trunk) (column 3, lines 26-28).

Mladenovic et al does not expressly disclose a connection without degrading signal quality below a predetermined threshold. Wellard et al discloses the use of an alternate network in the event that QoS falls below a predetermined threshold. As illustrated by figure 2, a call is placed on a first network in step 180, and the QoS is monitored in step 190. In step 200, the QoS monitor (without degrading signal quality) checks if the QoS falls below a threshold (predetermined threshold). If the QoS falls below a threshold, an alternate network is employed (column 4, lines 27-35).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Wellard et al in Mladenovic et al to determine the QoS of the unreliable network while a call is in progress and transfer the call to a different network in a way that is transparent to the participants (Wellard et al, column 2, lines 3-6). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Mladenovic et al and Wellard et al so as to obtain the invention as specified in claims 15, 16, 17, and 18. Mladenovic also discloses a sound channel (PSTN line 16).

Neither Mladenovic nor Wellard explicitly discloses operating as a channel regardless of whether sound is present on the trunk channel. However, operating as a sound channel regardless of whether sound is present on the trunk channel is well known in the art. In particular, Fujino teaches a bearer circuit with respect to the trunk channel operated such that bearer circuit continues (see FIG. 7C, continuous CH#0-7) to be operated as a sound channel regardless of whether sound is present on the trunk (see FIG. 7C, speed channel CH#1 and silent channel CH#2; see col. 8, line 40-67; note that channels/circuits are assigned and operated continuously

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from CH#0-7 on speech and silent channel). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide, as taught by Fujino in the combined system of Mladenovic and Wellard, so that it would reduce the deterioration of a band and of sound quality; see Fujino col. 8, line 44-46; and provide highly efficient and high quality communication; see Fujino col. 2, line 15-19.

Allowable Subject Matter

6. Claims 6-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1,2,4,5,15-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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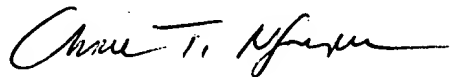
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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